

SNF Stabilization and Disposition (RL-0012)

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*K Basins Closure Project
Mark 1A Scrap Basket*



*Central Plateau D&D
K East Basin Dewatering
Tent*



*Sludge Treatment Project
(STP) Settler Tank
Retrieval Test Hose Reel*

Overview

This section addresses work in Project Baseline Summary (PBS) RL-0012, *Spent Nuclear Fuel (SNF) Stabilization and Disposition*. There are three major components to this work scope:

- K Basins Closure Project [M. W. Peres].
- Sludge Treatment Project (STP) [D. G. Ruscitto].
- Deactivation and Decommissioning (D&D) [R. E. Wilkinson].

NOTE: Unless otherwise noted, all information contained herein is as of the end of December 2007.

Notable Accomplishments

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K East Deactivation and Decommissioning (D&D) Project

- Completed fabrication and installation of K East fixative system.
- Completed sluicing filter media to Large Diameter Container.
- Installed and tested K East controlled density fill placement system.
- Grouted Ion Exchange Columns/North Load-Out Pit/sand filter/vault.
- Began training Radiation Control Technicians (RCTs).
- Installed and began operation of Ion Exchange Module for water quality.

K West Basin Floor and Pit Sludge Retrieval (FPSR)

- Completed K West Basin final pass vacuuming (Tri-Party Agreement Milestone M-34-35b) 35 days ahead of schedule.
- Returned primary process table frames to original locations.
- Disabled West Secondary Process Table for implementation of Authorization Basis (AB) change.

Legacy Fuel

- Completed 80 percent of Cold Vacuum Drying Facility (CVDF) preventive maintenance.
- Implemented Fuel Retrieval System AB and Safety analysis report for packaging (SARP).
- Received second and third PAS-1 Cask shipments from Washington Closure Hanford, LLC (WCH).

Sludge Treatment Project (STP)

- Transition Plan and FY 2008 baseline change request (BCR) conditionally approved by RL.
- Completed Integrated Process Flow Diagram Value Management workshops.
- Approved Data Quality Objective (DQO) for Accountability.
- Incorporated RL comments and released Functional Requirements Document (FRD).
- Completed original issue of Mobile Solidification System (MOSS) report.
- Obtained Safeguards and Security approval for ultrasonic test (UT) measurement method to calculate Settler Tank sludge volumes.
- Completed Hazard Analysis for Settler Tank Sampling Retrieval Concept.

Issues

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K East D&D Project

- Installation of the dewatering system is slower than planned while conducting management assessment of readiness and training.

K Basins Closure Project

- Maintaining qualified personnel required for Multi-Canister Overpack (MCO) startup. Personnel training and assignments are being closely managed to minimize potential impacts.
- Additional debris canisters require sorting; the use of Project Management Reserve was approved to provide for the performance of the additional work, to complete in time to support MCO final processing.
- Amount of fines and scrap fuel may impact readiness to load the MCO or result in non-optimized loading. The canister sorting has been prioritized to examine containers with high potential to contain scrap and a new sorting table has been manufactured and will be installed to improve sorting efficiency and process rate. Studying the technical possibility of using a single MCO for final shipment.

STP

- Central Characterization Project (CCP) contracted with Waste Isolation Pilot Plant (WIPP); liaison impacts design (shifting Waste Acceptance Criteria [WAC] direction from DOE).
- Establishing a Waste Isolation Pilot Plant (WIPP) Certified Lab at Hanford.
- Addressing potential for new Remote-Handled Transuranic (RH-TRU) Waste Storage Facility.

FY 2008 Funds vs. Spend Forecast (\$M)

	Projected FY 2008 Funding	FY 2008 Fiscal Year Spending Forecast	Variance
SNF Stabilization & Disposition	\$ 106.4	\$ 99.3	\$ 7.1

Schedule/Cost Performance (\$M)

SNF Stabilization & Disposition	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance \$	Schedule Variance %	Cost Variance \$	Cost Variance %	Budget At Completion (FY08/ CTD)
Current Period (Month)	\$7.7	\$9.0	\$9.5	\$1.3	16.7%	-\$0.4	-4.6%	\$90.6
Cumulative-to-Date (FY 2004 - Present)	\$521.4	\$516.5	\$590.5	-\$4.9	-0.9%	-\$74.0	-14.3%	\$589.7

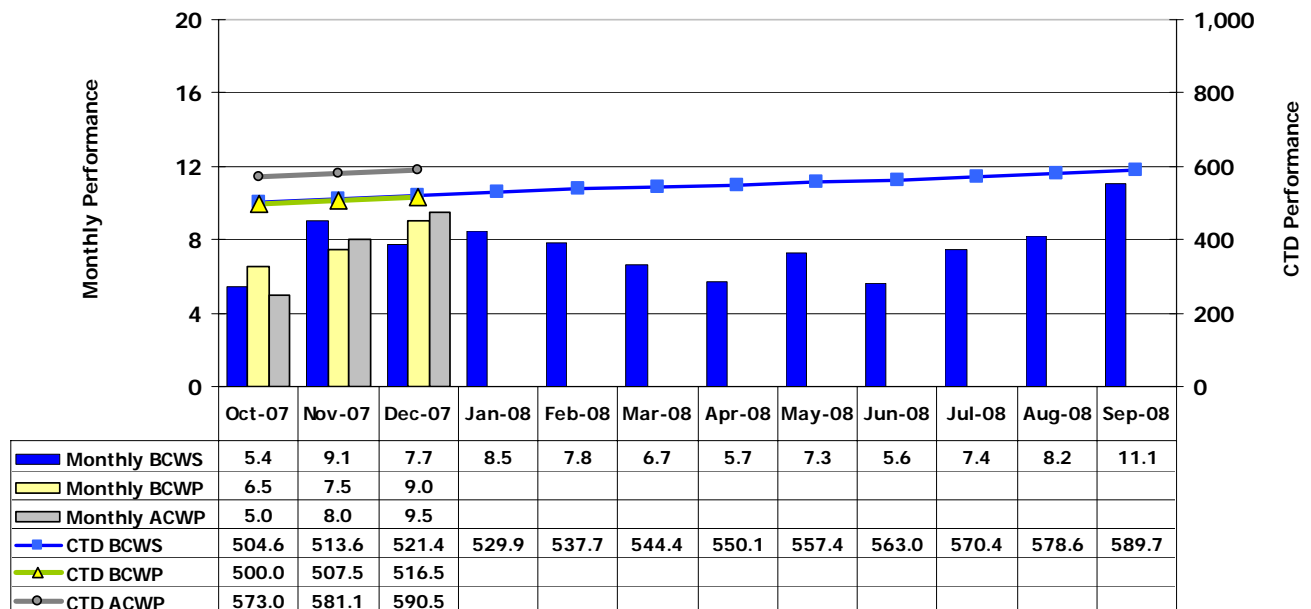
Numbers are rounded to the nearest \$0.1M and include the closure services allocation.

- CTD Schedule Performance (-\$4.9M/-0.9%):** Unfavorable SV is due to delays in Legacy Fuel work scope and K East to K West Sludge Transfer system D&D; delays approving AB changes and coordination with other D&D activities. Delays in K East D&D are pending implementation of baseline update reflecting implementation of value engineering actions. Delays in the Sludge Treatment Project in design review, procurement, and construction activities are due to the decision to implement the critical decision process into design requirements.

Schedule/Cost Performance (\$M), continued

- **CTD Cost Performance (-\$74.0M/-14.3%):** The unfavorable CV is primarily due to problems encountered in design, implementation, startup, and operation of spent fuel removal, sludge containerization, and transfer systems. System complexity and requirements were underestimated. Most of the cost variances were incurred prior to FY 2006.

Performance Analysis CTD and Monthly (\$M)



Milestone Achievement

Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement) milestones and Defense Nuclear Facilities Safety Board (DNFSB) commitments represent significant events in project execution. DOE Enforceable Agreement milestones were established to provide high-level visibility to critical deliverables and specific status on the accomplishment of these key events. The FY 2008 Enforceable Agreement milestone/DNFSB commitment information provided herein is based upon the current baseline including RL-approved changes. Changes from month-to-month in both the total number of milestones to be completed and in the forecast status of upcoming milestones are the result of BCRs approved during the reporting period.

Number	Milestone Title	Type (TPA/PI/DNFSB)	Due Date *	Actual Date	Forecast Date	Status / Comments
M-034-33B (S10-05-018)	Complete K East Sludge Containerization	TPA	03/01/05	10/20/06		Complete
DNFSB 119E (S10-05-014)	Complete K East Bulk Sludge Consolidation	DNFSB	10/31/06	10/20/06		Complete
M-034-34 (S10-05-010)	Complete Removal of K East Sludge	TPA	05/31/07	05/31/07		Complete
DNFSB 120E (S10-05-015)	Complete K East Basin Containerized Sludge Removal	DNFSB	05/31/07	05/31/07		Complete
DNFSB 122E	K East Final Pass Sludge Removed	DNFSB	05/31/07	05/31/07		Complete
M-034-35a (S10-05-011)	Containerize K West Bulk Sludge	TPA	07/31/07	07/03/07		Complete
DNFSB 119W (S10-05-016)	Complete K West Bulk Sludge Containerization	DNFSB	07/31/07	07/03/07		Complete
M-034-35b (S10-05-011)	Complete K West Final Pass	TPA	01/31/08	12/27/07		Complete

* DNFSB dates reflect Implementation Plan update, TPA dates reflect change package M-34-05-04, forecast dates are current working level schedules.